Remarks

Claim Objections

In the Office Action of May 18, 2007 (hereinafter, "Office Action"), claims 1, 2, 5, 6, and 7 are objected to because of claim informality. Since there are two selectors in independent claim 1, the first selector should be noted as "a first selector". Relevant dependent claims should also be updated.

Please note that claims 1, 3, 5, 6, and 7 have been amended in the "Claim Amendments" section at the end of this document. The amended claims replace "selector" with "first selector". Applicant respectfully requests entry of these claim amendments.

Rejections under 35 U.S.C. § 102

In the Office Action, claims 11, 12, 17, and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by Shyu, US Patent No. 7,100,068 (hereinafter, "Shyu"). Please note that claims 11, 13, 14, 15, 17, and 19 have been amended.

Claim 11 has been amended to recite "a plurality of selectors" rather than merely "a selector". Support in the specification for this amendment may be found in Figure 4 and on pages 10 - 11. In Figure 4, a performance control apparatus 110 of a processor-based system 200 includes knobs 120, 140, and 160. The knob 120 "provides a mechanism by which the user of the processor-based system can control whether the currently running software is operating strictly from the disk drive 62...strictly from the memory 64...or from a combination of the disk drive and the memory" (page 10, lines 22 - 26). The knob 140 " provides a mechanism by which the user of the processor-based system 200 can control the speed of the clock 78 connected to the processor 60" (page 11, lines 3 - 5). The knob 160 " provides a mechanism by which the user

of the processor-based system 200 can control the speed of the one or more fans present in the system" (page 11, lines 17 - 19). These three knobs, "provide...the user with independent control of multiple performance-based characteristics of the system" (page 10, lines 16 - 19).

Claim 11 is further amended to recite that the "performance-related criteria" comprise "a processor clock rate, a fan speed, and disk drive usage". Again, the specification discloses these three performance-related criteria. Claim 13 is amended merely to correct a typographical error ("wherin" to "wherein").

In claims 14, 17, and 19, the amendments further specify that "the plurality of selectors" comprise "a first selector for controlling the processor clock rate", "a second selector for controlling the fan speed" (claim 14), and "a third selector...to modify the disk drive usage" (claim 19). These modifications are likewise consistent with the disclosure of pages 10 and 11.

Claims 14 and 17 are amended to indicate that the adjustment knobs may operate independently or dependently, respectively. Both embodiments are disclosed in the specification. The knob 20 in Figure 1 indicates "quiet" on one end and "fast" on the other end. One indicator has to do with fan noise while the other has to do with speed of operation. In this embodiment, the processor clock rate and fan speed are interrelated. In Figure 4, by contrast, there are separate knobs, and thus separate independent control, of the three performance-related criteria. It is with the above amendments in mind that the following arguments are made.

Shyu discloses a "panel device for adjusting computer's operating frequency and showing system information" (title). Shyu shows a "panel device 1" with an "adjustment unit 11" connected to a microprocessor 13 and a display module 12 (Figure 1). The microprocessor 13 further connects to a CPU 21 of a

computer 2. By operating the adjustment unit, the operating frequency of the CPU 21 may be adjusted (col. 2, lines 30 - 43). The adjustment unit may be "a knob, or a set of buttons including a speed-up button and a speed-down button" with "multiple adjustment stages" being possible (col. 2, lines 54 - 58). Operation of the adjustment unit changes the operating frequency of the CPU (col. 2, lines 58 - 67). Shyu refers to a more detailed description of the adjustment unit 11' and display module 12' (Figure 2), in which the display module 12' "displays system information", such as operating frequency, CPU temperature, system temperature, motherboard status, hard disk status, CD-ROM status, over-temperature indicators, and a call-help indicator (col. 3, lines 10 - 17). These are not user controls, but are status indicators.

Regarding fan speed, Shyu does not disclose that the adjustment units 11 or 11' are used to control fan speed, but only operating speed of the CPU 21. Shyu discloses that the CPU temperature and system indicators, when lit at a certain color, will cause "the rotating speed of fan mounted in the computer 2" to "be increased by one stage for cooling as commanded by the microprocessor 13" (col. 3, lines 40 - 55). This would happen automatically, whether the display panel exists or not. Computers often have fans, which are automatically invoked whenever the processor exceeds a certain operating temperature, for example.

What is distinguishable with the present case is that Applicant's claimed invention discloses actually control of the fan speed by the user. In Figure 4, the knob 160 may be set between "quiet" and "loud" while the processor speed may be controlled by the knob 140, which goes between "slow" and "fast". These two knobs operate independently of one another. Thus, the user may adjust the processor to run very fast and simultaneously turn the fans down very low. However unwise it may be to do this, the option is provided with Applicant's

claimed invention, while in Shyu, control is available of the CPU speed only, with no direct or independent control of the fan being possible.

Further, Shyu does not even claim a fan speed selector. Claim 8, the only claim that refers to the fan, recites that the "panel device" further comprises "a fan being that is activated by the microprocessor for cooling the computer if the yellow LED is lit". So, Shyu is claiming the effect that the yellow LED has, not a selector for fan speed.

In view of the foregoing arguments, Applicant's amended claims are distinguishable from Shyu. Applicant respectfully requests reconsideration of the 102(e) rejection of claims 11, 12, 17, and 19.

In the Office Action, claims 1 and 21 - 23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Cline et al., US Patent No. 5,550,970 (hereinafter, "Cline"). Please note that claims 1, and 21 - 23 have been amended.

In addition to the amendment described in the "Claim Objections" section, above, claim 1 has been amended to indicate that the "one or more performance criteria" comprise a processor clock rate, a fan speed, and disk usage". Claim 2 has additionally been amended to recite an additional selector, the first selector being used to adjust the processor clock rate and the second selector being used to adjust the fan speed. Claim 2 further recites that the two selectors are independently controllable.

Claims 21 - 23 have also been amended, to specify that the "first performance-based characteristic" is the processing speed (claims 21 and 22) while the "second performance-based characteristic" is the "system noise characteristic" (claim 23). These characteristics are depicted specifically in Figure 5, in which the performance control apparatus 300 consisting of a

graphical user interface 302 enables the user to independently control processing speed and system noise for groups of applications, such as games, music, and video (Figure 5; see also page 13, lines 20 - 25). It is with the above amendments in mind that the following arguments are made.

Cline discloses a mechanism by which RAM space may be allocated to different programs by accessing an allocation dialog 200. Different programs are allocated different percentages of the available RAM, but the allocation may be user-modified (col. 4, lines 6 - 29). Cline refers generally to allocation of a "resource" of the computer system, the resource may be RAM storage, microprocessor time, or hard disk space (claim 9). Cline gives an example that "a user may desire to control the proportion of processor time allocated to each of several concurrently running programs" (col. 1, lines 16 - 18) or "allocating...hard disk space to various file systems".

While Cline discloses a user-controllable feature of the system, the feature is distinguishable from Applicant's claimed invention. Cline enables the user to control the resource allocation (RAM, processor time) for multiple running programs while Applicant's claimed invention enables the user to specify the processor operating speed (clock rate) and/or fan speed (system noise) for a program or group of programs each time those programs are run. Thus, a game application may be run at the highest operating speed with Applicant's claimed invention. With Cline, the game may be designated as using the highest allocation of RAM, relative to other programs running simultaneously, or may be given priority in processing (although Cline describes "proportion of processing time" as a "resource", there are no implementation details, except when the resource being allocated is RAM).

Further, where Applicant's "performance criteria" includes disk usage, the disk usage is not allocated among different programs loaded or running in the system. Instead, "disk usage" refers to either the program running from the disk drive (with some performance cost and increased noise) or from the RAM. In contrast, Cline's "resource allocation" pertains to allotment of RAM only (no disk drive reference is made), and the division of RAM between applications running in the system. Thus, where Applicant's claimed invention focuses on the application, and how the user may configure the system to operate in a preferred manner when the application is running, Cline's patent focuses on how to optimally divide resources among competing applications. Both inventions give the user some power to configure the system to operate in a desired manner, but produce completely different results.

Amended claims 1 and 21 - 23 are distinguishable from Cline. Amended claim 1 makes it clear that the performance criteria are either processor clock rate, fan speed, or disk usage. Claim 2 further indicates that there are two separate selectors for processor clock rate and fan speed. Claims 21 - 23 are amended to specify that the first performance-based characteristic is "processing speed" while the second performance-based characteristic is "system noise". Neither of the quoted terms can be found in Cline. In view of the claim amendments, Applicant's invention is distinguishable over Cline. Applicant respectfully requests reconsideration of the 102(b) rejection of claims 1 and 21 - 23.

In the Office Action, claims 24 - 27 are rejected under 35 U.S.C. § 102(b) as being anticipated by Phoenix Technologies Ltd. (Phoenix PowerPanel 3.0) (hereinafter, "Phoenix"). Please note that claims 24 and 25 have been amended while claims 26 and 27 have been cancelled. Claim 24 replaces "a set of

performance criteria" with "adjusting the speed of one or more fans" while claim 25 replaces "a second set of performance criteria" with "adjusting a processor clock rate". The narrowed claims 24 and 25 render claims 26 and 27 redundant.

The amended claims are distinguishable over Phoenix. Phoenix pertains to power management capability of a system. Phoenix allows a user to "control the power state of devices in the system" (paragraph 3). Power management in the BIOS and/or in the operating system includes timers for the various power-controlled devices, such that the devices may be powered down during periods of non-use, thus possibly extending the operating life of the processor-based system. Thus, devices such as the video, the hard disk, and the processor may be controlled by changing the timer values. Phoenix allows the user to specify the timer values depending on the application program that is running.

Applicant's claimed invention is distinguishable over Phoenix. A configuration profile is associated with a given file type grouping. The configuration profile specifies adjusting the speed of one or more fans operating within the processor-based system (claim 24). A second configuration profile is associated with a second file type grouping. The second configuration profile specifies adjusting a processor clock rate of the processor-based system (claim 25). Phoenix does not disclose processor clock rate adjustment and/or fan speed adjustment. Further, Phoenix does not enable grouping of file types, with adjustment of the processor clock rate or fan speed to take place automatically for each file group. Instead, Phoenix allows the user to specify a Power Profile, specific to an application, that enables the well-known power management devices (hard disk, video, processor) to be shut down when the application is running. For at least these reasons, Applicant's amended claims 24 and 25 are distinguishable over Phoenix.

Rejections under 35 U.S.C. § 103

In the Office Action, claims 1 - 5 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shyu in view of Cline. Please note that claims 1, 2, 3, and 5 have been amended, as described above. Claim 8 has been amended to remove the specification of the processor clock rate as one of the performance criteria, since this is now recited in independent claim 1. For the following reasons, Applicant respectfully disagrees.

Neither Shyu nor Cline disclose, teach, or suggest adjusting all three performance-related criteria, processor clock rate, fan speed, and disk usage, as is recited in Applicant's amended claim 1. Shyu says nothing about fan speed or disk usage, Cline says nothing about processor clock rate, fan speed, or disk usage, but only refers to RAM allocation among programs. For at least these reasons, amended claims 1 - 5 and 8 are non-obvious over Shyu in view of Cline. Applicants respectfully request reconsideration of the obviousness rejection.

In the Office Action, claims 13 - 16 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shyu in view of Sato, U.S. Patent No. 6,627,829 (hereinafter, "Sato"). For the following reasons, Applicant respectfully disagrees.

Sato discloses a switch 10 with indicators 12, in which information provided by the indicators is increased by changing the color of indicators (Abstract). Specifically, an indicator may change color when a switch state lies between two different states (col. 5, lines 21 - 27). Applicants' claim 13 recites LED indicators while claim 16 recites the LEDs changing color.

Applicants' claims 13 - 16 and 18, however, depend from amended claims 11 and 12, which recite, "a plurality of selectors for designating one of several setting ... wherein each setting modifies one or more performance-related criteria ... comprising a processor clock rate, a fan speed, and a disk drive usage". Thus,

claims 13 - 16 and 18 are not merely claiming LED indicators which can change color, but are part of a narrower claim having several components, as recited in claims 11 and 12.

The combinations of Shyu and Sato nevertheless fail to read on Applicants' claims 13 - 16 and 18. As explained above, while Shyu enables a user to change the computer's operating frequency, all other operations of Shyu are status indicators, not adjustable by the user. Further, Shyu fails to disclose, teach, or suggest that the computer's fan speed or disk usage may be adjusted by the user, nor does Shyu provide separate controls for such adjustment. Sato is directed to the LEDs surrounding adjustment knobs, but does not specify that these adjustments may be made to control a computer's "processor clock rate, fan speed and disk drive usage", as recited in amended claim 11. For at least this reason, amended claims 13 - 15 and 18 are non-obvious over Shyu in view of Sato.

In the Office Action, claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shyu in view of Cline and in view of Sato. For the following reasons, Applicant respectfully disagrees.

The above arguments with respect to claims Shyu and Sato are again pertinent here. Applicants' claims 6 and 7 depend from several claims, first amended claim 1, which, as described above, recites, "a performance control apparatus comprising a first selector ... to modify one or more performance criteria ... comprising a processor clock rate, a fan speed, and a disk usage"; claim 2, which recites, "a second selector" which is "independently controllable"; claim 4, which recites that the performance control apparatus further has "a display" indicator. Thus, claims 6 and 7 are not merely claiming LED indicators which can change color, but are part of a narrower claim having several components, as recited in claims 1 - 5.

The combinations of Shyu, Cline, and Sato nevertheless fail to read on Applicants' claims 6 and 7. As explained above, while Shyu enables a user to change the computer's operating frequency, all other operations of Shyu are status indicators, not adjustable by the user. Further, Shyu fails to disclose, teach, or suggest that the computer's fan speed or disk usage may be adjusted by the user, nor does Shyu provide separate controls for such adjustment. Cline, also discussed above, doesn't disclose, teach, or suggest adjusting processor clock rate, fan speed, or disk usage, but enables the user to specify how much RAM is allocated for a given application program. Sato is directed to the LEDs surrounding adjustment knobs, but does not specify that these adjustments may be made to control a computer's "processor clock rate, fan speed and disk usage", as recited in amended claim 1. For at least this reason, amended claims 6 and 7 are non-obvious over Shyu in view of Cline and in view of Sato.

In the Office Action, claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shyu in view of Cline in view of Su, U.S. Printed Publication No. 2005/0053492 A1 (hereinafter, "Su"). For the following reasons, Applicant respectfully disagrees.

Su is a "cooling fan with built-in adjustable speed" (title). A user can adjust the fan speed by controlling a knob or touch button (paragraph 27). Applicants' claim 9 has been amended, due to the amendment of claim 1, in which the performance criteria is defined to include fan speed. Amended claim 9 recites that "the performance control application program ... comprises ... application program selector for enabling the user to adjust the fan speed during execution of the application program". Claim 9 depends from claim 8, which depends from claim 1, both of which have been amended. Taken together, claim 9 recites that there is both a selector for adjusting processor clock rate, fan

speed, and disk usage, and two application program selectors, one for adjusting the processor clock rate during execution of an application program, the other for adjusting the fan speed during execution of the application program.

Neither Shyu, Cline, nor Su disclose, teach or suggest this combination of claim components. First, neither Shyu, Cline, nor Su disclose, teach, or suggest the three performance criteria described above. Cline, in particular, discloses none of the performance criteria claimed in Applicants' amended claim 1. Cline discloses allocating RAM per application program, but not adjusting processor clock rate (claim 8) or fan speed (claim 9) based on the application program running. Su discloses adjustment of fan speed, but not the other two performance criteria. None of the cited art discloses adjusting the performance criteria based on which application program is running. For at least these reasons, Applicants' claim 9 is non-obvious over Shyu in view of Cline in view of Su.

In the Office Action, claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cline in view of Phoenix. For the following reasons, Applicant respectfully disagrees.

Phoenix pertains to the power management capability of a system. Phoenix allows a user to "control the power state of devices in the system" (paragraph 3). Power management in the BIOS and/or in the operating system includes timers for the various power-controlled devices, such that the devices may be powered down during periods of non-use, thus possibly extending the operating life of the processor-based system. Thus, devices such as the video, the hard disk, and the processor may be controlled by changing the timer values. Phoenix allows the user to specify the timer values depending on the application program that is running.

Applicant's claim 10 depends from amended claim 1. Claim 10 recites, "a performance control icon, accessible from within the application program ... [to] enable[s] the user to modify one or more performance criteria from within the application program". This is distinguishable from the adjustment control knobs, and may include a graphical user interface (GUI), such as the performance control knob 326 depicted in Figure 5. Phoenix allows power-down of subsystems to be based on the application program running, but Phoenix does not disclose, teach, or suggest adjustment of fan speed or disk usage based on the running application program. Further, Phoenix does not disclose processor clock rate adjustment and/or fan speed adjustment. Cline, as explained before, discloses allocation disk usage per application program, which is not related to fan speed adjustment, disk usage, or processor clock rate. For at least these reasons, Applicant's amended claim 10 is non-obvious over Cline in view of Phoenix.

In the Office Action, claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cline in view of Phoenix in view of Liu et al, U.S. Printed Publication No. 2005/0030171 A1 (hereinafter, "Liu").

Please note that claim 20 has been cancelled, as claims 14 and 17 cover the scope of claim 20.
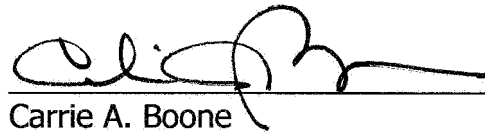
Conclusion

For the above reasons, Applicants respectfully request allowance of claims 1 – 19 and 21 - 25.

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Respectfully Submitted,

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